Harworth Estates

POLICY 3 – HABITAT MANAGEMENT AND MAINTENANCE PLAN

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1.0 INTRODUCTION

1.1 This amalgamated management plan has been prepared by ecologists at FPCR Environment and Design Ltd in order to provide specific detail regarding the management of habitats provided for great crested newts *Triturus cristatus* (GCN) under previous European Protected Species Licences and those associated specifically with the proposed development site (to be used as a coal-stocking yard prior to future development) associated with this 'Policy 3' application. It is considered that this plan will help continue to ensure suitability for great crested newts within the wider area. This report will also form the basis of a NERC Act 2006 Agreement which is to accompany the proposed implementation of Natural England's Licensing Policy 3 in association with the extant GCN European Protected Species Licence (2016-21449-EPS-MIT). Full details of the history of the site can be found within the associated EPS Licence application.

1.2 Survey information obtained during surveys undertaken in 2017 have confirmed the presence of a 'Medium' population within the local area (although at the low end of this scale with a peak count of 14 GCN – full details within the accompanying application). This is a slight rise from the 'Small' population size-class originally present on-site/within the local area and demonstrates that the Licensable works undertaken thus far under the previous Licences have not only maintained the Favourable Conservation Status of this species but also enhanced it.

1.3 The accompanying Licence application includes provision for ensuring that this FCS will continue to be maintained (and ideally further enhanced) and includes appropriate population monitoring associated with a Licence issued under Policy 3.

1.4 This document has been prepared in line with comments from Natural England as a result of a Discretionary Advice Service (DAS) request (10th October 2017). **The minor amendments/additions added in December 2017 are in bold underline.**

Features of Interest

1.5 Currently the area associated with the proposed development site comprises recently-seeded grassland following the restoration scheme associated with the surface-mining operations now complete on site (see Figure E3.1). The site is surrounded by temporary amphibian fencing on its western, northern and eastern boundaries. New waterbodies have been recently been-created as part of the previous works (ponds PX, PY and PZ) and are currently establishing (left to colonise naturally) with GCN aquatic surveys undertaken in 2017 observing no GCN.

1.6 As detailed in the Licence is proposed that the amphibian fencing is to be removed with the site subsequently operated as a coal-stocking yard prior to subsequent development. As part of the ongoing works (prior to commencement of site operations as a coal-stocking yard) management will take place to reduce any risks of GCN-suitable habitat becoming established on site (management of the GCN-suitable habitats off-site will also continue).

2.0 SUMMARY BASELINE

2.1 The following text provides a summary of the GCN survey data from 2011, 2012 and 2017, for full details, please consult Appendices A, B and C.

Aquatic Surveys (Appendices A and B)

2.2 Habitat assessments of 17 waterbodies were undertaken in 2009 (re-assessed in 2011) (P1 - P14 & D1 - D3), whilst aquatic monitoring surveys were undertaken on all suitable/accessible waterbodies in 2011 and 2012 (Appendix A ï including summary of historical surveys). An additional pond (P12) was surveyed in 2010 as requested by Natural England.

2.3 P2, P3 and P5 comprised the original breeding ponds. PA to PF comprise the newly-created ponds within the reserve, with Px, Py and Pz being created in late-2016 and surveyed as part of monitoring in 2017.

Table 1: Aquatic Survey Data Summary 2011 to 2012 (Appendix A)

Pond ref	Gt. crested newts detected?	Peak adult count
P2	**Yes**	1
P3	**Yes**	5
P5	No	0
P6	**Yes**	9
P7	**Yes**	1
P8	No	0
P9	No	0
PA	No	0
PB	No	0
PC	No	0

Table 2: Aquatic Survey Data Summary 2017 (Appendix B)

Pond ref	Gt. crested newts detected?	Peak adult count
P2	No	0
P3	No	0
P5	No	0
P6	**Yes**	5
P7	No	0
PA	No	0
PB	**Yes**	5

Pond ref	Gt. crested newts detected?	Peak adult count
PC	**Yes**	1
PD	**Yes**	2
PE	**Yes**	3
PF	**Yes**	1
PX	No	0
PY	No	0
PZ	No	0

Trapping Data (Appendix C)

2.4 During trapping in 2010 (Phase 1) a total of 118 GCN were trapped and translocated, in 2011 (Phase 2) only five GCN were recorded, the location and dates for these Phase 2 captures are provided in Appendix C.

3.0 OVERALL MANAGEMENT REGIME

Outline Prescriptions

3.1 Outline prescriptions for achieving the above aims are provided below (Table 1), it is expected that the management prescriptions below should be suitable for the duration of the works.

Table 3: Outline prescriptions

Habitat	Management Proposals
Main Site Area **Management to be undertaken by Harworth**	a) In advance of the commencement of any use as a coal-stocking yard the entire site area should be cut five or six times a year to prevent the establishment of tussocky grassland. b) Arisings should be collected at the time of cutting and removed from the site area.
Ponds Px, Py and Pz ï to the south of the Main Site Area **Management to be undertaken by Harworth**	a) The vegetation within and around the existing ponds will be allowed to colonise naturally and assessed to determine the levels of colonisation by locally native and invasive species. b) Care will be taken to ensure that non-native or invasive species do not become established. Areas of open water and associated vegetation will provide habitat for great crested newts and other amphibians and will be left largely unmanaged. c) The marginal vegetation however will be monitored to ensure that this does not exceed 50% of the open water. If cutting is required it should be undertaken in the autumn (outside of the amphibian breeding season mid-March to mid-June), with the arisings left by the ponds edge for 48 hours to allow any trapped animals to escape. The arisings would then be cleared to the designated composting area. d) Any scrub tree planting surrounding the waterbodies should be controlled to ensure over shading doesn't affect the vegetation within the pond or create considerable leaf fall, (which should be cleared with the ponds de-silted where necessary). e) Checking for fish presence and removal through appropriate methods will be undertaken. f) Checking pond condition and remedial action as required g) Checking for and removal of dumped rubbish. h) Reinstatement following fire, acute pollution or other major damage. i) The above follows the ôStandard Habitat Management and Maintenanceô as prescribed in section E5.1 of GCN Method Statement August 2017.

Habitat	Management Proposals
Woodland ï to the south of the Main Site Area **Management to be undertaken by Harworth**	a) Management will be undertaken to promote stand development and control invasive species. The use of herbicides and intervention by mowing will be minimised to allow natural regeneration of ground flora and woody species within the stands, the aim being to create ecologically diverse woodland. b) The need for brashing or formative pruning will be assessed during the management period and implemented where required.
Rough Grassland ï to the south of the Main Site Area **Management to be undertaken by Harworth**	a) 50% of rough-seeded grassland should be cut during spring/late summer to a height of no less than 150mm. The remaining 50% will be cut once every other year. b) Grassland adjacent the woodland should be left completely unmanaged. c) Remove arisings approximately 48 hours after mowing, these should be placed in a designated area within the site to provide hibernacula.
Existing Reserve to the East **Management to be undertaken by Northumberland Wildlife Trust**	a) The existing reserve to the east has been installed as part of the mitigation for Phase 1 and Phase 2 of the GCN licence works. The habitats in this area have developed well over the last few years (confirmed during a site visit in late 2015). b) The reserve area will continue be managed by the Northumberland Wildlife Trust (NWT) who are to undertake this in perpetuity with the management prescriptions for the relevant areas following those detailed above.

4.0 DESTRUCTIVE SEARCHES

4.1 Should any areas of suitable GCN habitat require disturbance in the future, theses would be undertaken under an approved good practice method statement comprising the following:

- A toolbox talk and information sheets (including identification documents) will be provided to the contractors to make them aware of the potential ecological issues.
- Hand search of suitable affected (suitable) vegetation by an ecologist on each day of works.
- Strimming of the suitable affected habitat down to 30cm/300mm under supervision from the on-site ecologist.
- The strimmed area will be left for at least 4-5 hours and the cut areas will then be hand searched again by the on-site ecologist.
- Following the second hand search, the contractors will then carefully strim the vegetation down to ground level.
- Any rubble or log piles that may be present will also be destructively searched under supervision from the on-site ecologist as carefully as possible.
- In the unlikely event these animals are recorded, they will be moved to the receptor area to the east.
- Contact details will be left with on-site staff so in the unlikely event any animals are recorded during the subsequent unsupervised works, further advice can be sought.

5.0 ONGOING SITE MONITORING

5.1 P2-3, P5-P7, PA-F and PX-Z within the centre of the site will be monitored in 2020, 2023, 2026 and 2028. The following methods will be employed:

5.2 Aquatic survey methods followed those recommended by Natural England as detailed in the Great Crested Newt Mitigation Guidelines (English Nature, 2001). To determine t**he population size class assessment for** great crested newts, a total of **six** individual survey visits are required between mid-March and mid-June with half of these surveys undertaken within the peak period (mid-April to mid-May). On each survey occasion three of a possible four different techniques (egg search, sweep net, bottle-trap and torch) were used where suitable. A summary of each methodology is provided below:

Bottle Trapping

5.3 Bottle traps were set within the waterbody in the evening at densities of one trap per two metres of shoreline (where feasible) and left overnight for inspection in the morning within 17 hours of setting. Traps were partially submerged in the water leaving an air bubble in the bottle and secured by a cane marked with a high visibility tape to ensure relocation the following day. Care was taken to ensure that trapping did not occur during excessively warm weather, when the temperature inside the trap could rise considerably, reducing oxygen levels and potentially suffocating the newts.

Sweep Netting

5.4 Long handled sweep-nets were used to sample the margins of the pond for great crested newts, with approximately 15 minutes of netting per 50 m of shoreline.

Torching

5.5 Torching involves searching the waterbody after dusk using high-powered torches to scan the margins and potential display areas for newts. The perimeter of the pond was walked slowly recording any newts observed. Torch surveys are unsuitable within heavily vegetated and/or turbid ponds or after periods of heavy rain as visibility is diminished.

Egg Searching

5.6 Newts lay single eggs on leaves of aquatic plants or other suitable pliable material, after which the material is folded over the egg to protect it. Great crested newt eggs can be distinguished from those of the other newts by their size, shape and colour. Submerged vegetation was examined for newt eggs and folded leaves gently opened to check for eggs. Once a great crested newt egg is identified, no further leaves need to be examined to minimise any further potential disturbance.